Interreg Baltic Sea Region

Co-funded by the European Union

Region Kalmar län

SUSTAINABLE WATERS
WaterMan

The WaterMan project

Feasibility study on dual pipe system for reuse of treated water in public building in Kalmar

Tobias Facchini

Region Kalmar County

Interreg Baltic Sea Region

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Challenge, background and objective

- Area of frequent droughts
- Buildings with existing dual-pipe system
- Hospital with high hygiene requirements

Main objective to study a possible secure system to receive reclaimed wastewater for buildings with a dual pipe system

Kalmarsundsverket

Public pressurized water well with recovered WW

Production of reclaimed WW in UF-plant

Connection point distribution pipe; 5-6 bar
Dosage of NaOCl to distribution pipe = micorbiological barrier no 2

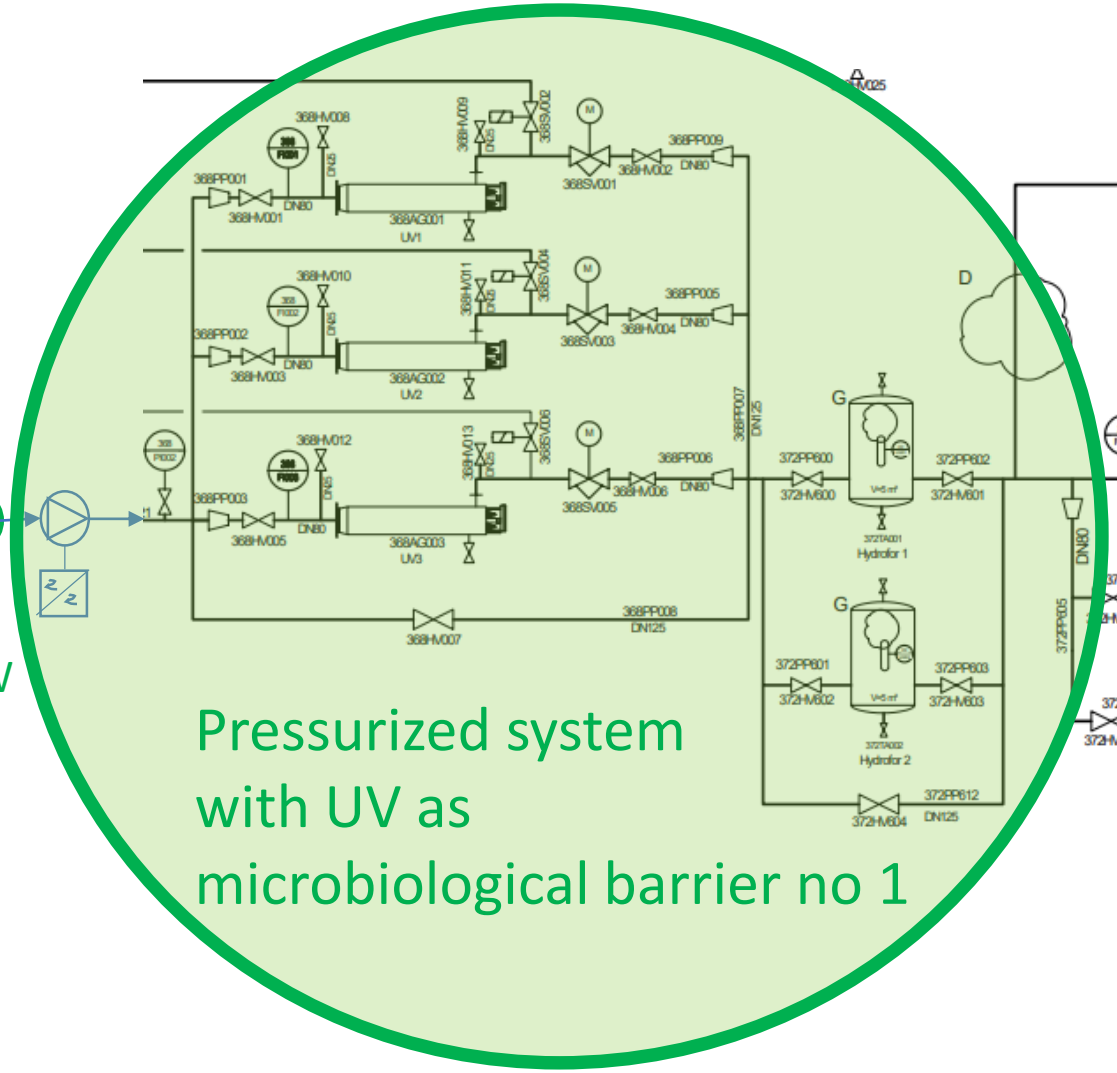
Pressurized system with UV as microbiological barrier no 1

Kalmarsundsverket

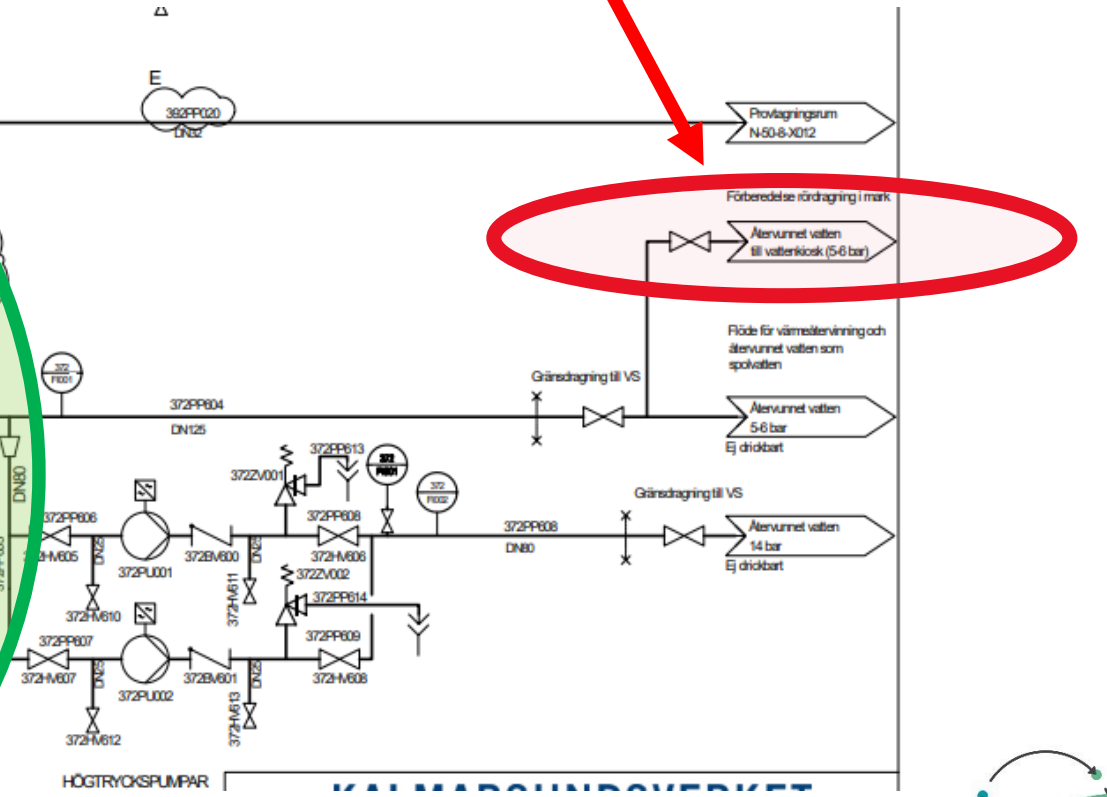
Connection point distribution pipe
5-6 bar

UF

Production of recovered WW in UF-plant

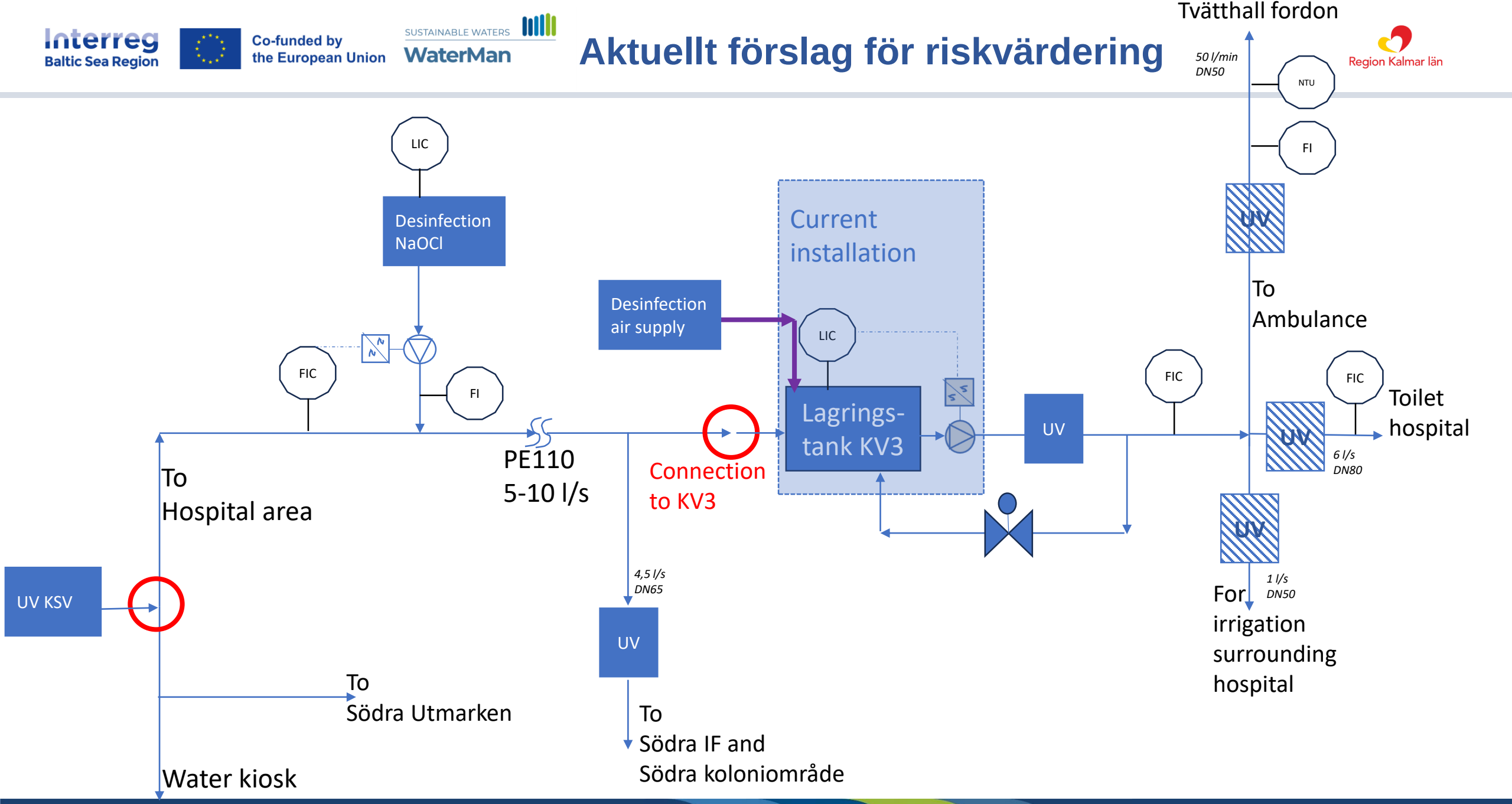


Pressurized system with UV as microbiological barrier no 1

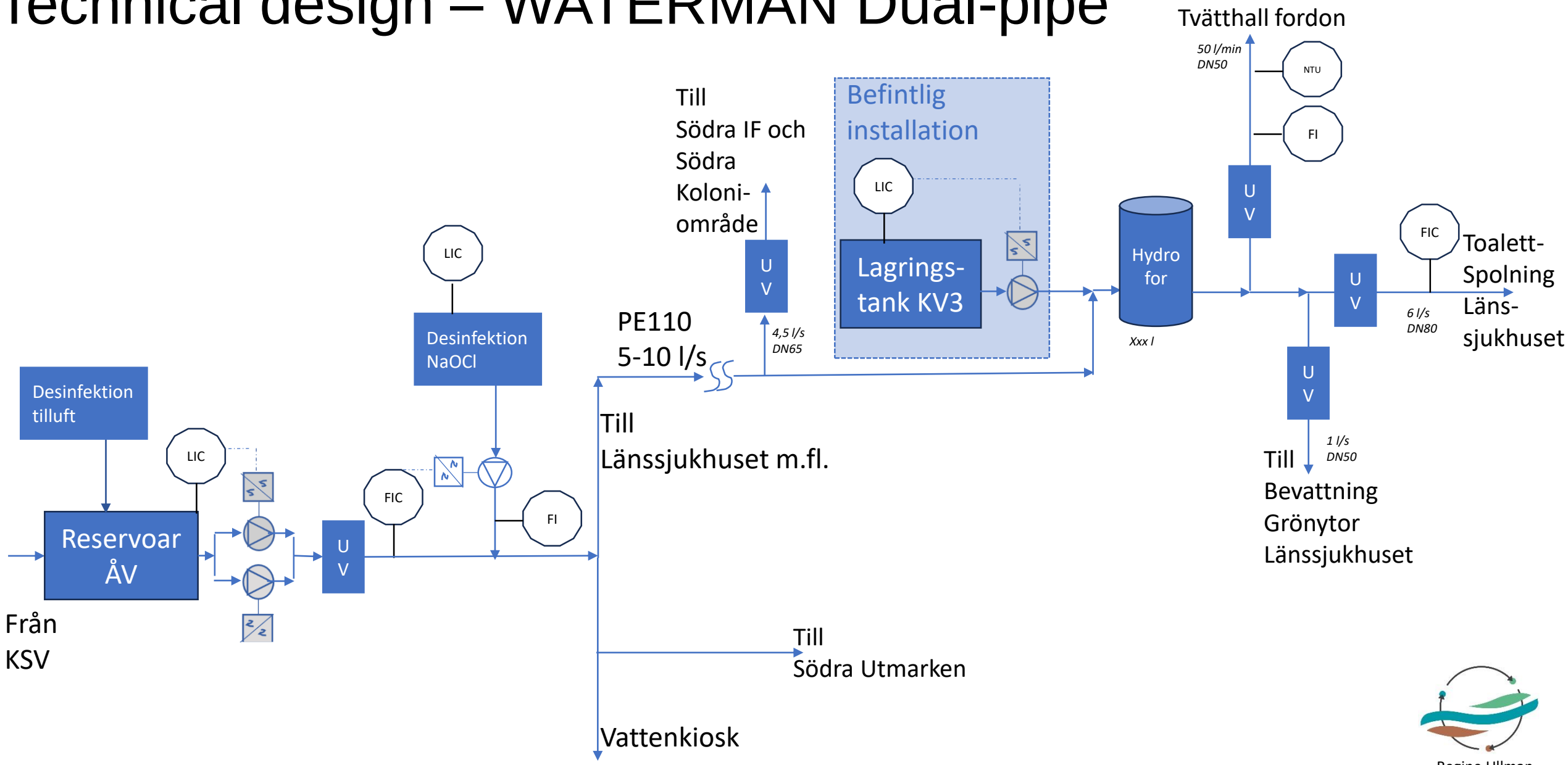


Regine Ullman
VA-processer AB

Aktuellt förslag för riskvärdering



Technical design – WATERMAN Dual-pipe



Regine Ullman
VA-processer AB

Distribution pipe - WATERMAN KV3

Connection point distribution pipe; 5-6 bar

Dosage of NaOCl to distribution pipe = microbiological barrier no 2

Volymes and area of use

User	Area of use	Consumption					Comment
		m^3/år	m^3/dygn	m^3/h (normal max)	l/min	l/s	
KV3 WC	Toilet flushing	91 250	250	12		5-10	365 d/år
Irrigation	Hospital plantations	610	3	2,6			Bevattning förutsätts ske halva ske halva året med 8h/d 8h/d (under natten).
	Hospital gras	3 000	16				
	Hospital new pond	180	1				
Future Ambulance Ambulance	Car wash				50		Bedöms som högt värde. värde. Bör innebära framtida möjligheter för nyttjande för nyttjande för tvätt.

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Final reflections – external consultant

- Biggest surprise – Hygiene experts within Kalmar region had same conclusions as own risk assessment
- Tough moments – solutions more expensive than first predicted
- Tips and insights – during the whole work process crucial to have a transparent and open dialogue with all key stakeholders
- Future wish – Full-scale pilot

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Recommendations & next steps

- Aim to proceed to piloting
- Further investigations needs to be carried out
- KSV not in place before 2027
- Estimated and possible financing still unclear
- Stakeholder group needs to be identified and developed

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The „BSR Water Recycling Toolbox" was elaborated as part of the WaterMan project, which is co-financed by the European Union (European Regional Development Fund) and implemented within the Interreg Baltic Sea Region Programme. More information:

eurobalt.org/WaterRecyclingToolbox
interreg-baltic.eu/project/waterman

WaterMan promotes a Baltic Sea Region-specific approach to water recycling, which makes use of the alternation of too much and too little water that has become typical for humid areas in the EU to strengthen the resilience of local water supply. Building on this approach, the project supports municipalities and water companies in adapting their water supply strategies.